

WHAT IS CLAIMED IS

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1. A working fluid which is supplied to a working point where
a working of a workpiece is performed with the working fluid,
comprising:

10 a solvent; and
microcapsules filled with liquid-state substances, said
microcapsules being dispersed in the solvent.

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2. The working fluid of claim 1, wherein said microcapsules
have an average particle size ranging from 0.1 μm to 1000 μm .

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3. A working process which performs a working of a
workpiece with a working fluid, the working fluid containing a
solvent and microcapsules filled with liquid-state substances, the
25 microcapsules being dispersed in the solvent, comprising the steps

of:

supplying the working fluid to a working point of the
workpiece; and

performing a cutting process of the workpiece at the working
5 point while supplying the working fluid to the working point.

10 4. A working process which performs a working of a
workpiece with a working fluid, the working fluid containing a
solvent and microcapsules filled with liquid-state substances, the
microcapsules being dispersed in the solvent, comprising the steps
of:

15 supplying the working fluid to a working point of the
workpiece; and

performing a grinding process of the workpiece at the working
point while supplying the working fluid to the working point.

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25 5. A working process which performs a working of a
workpiece with a working fluid, the working fluid containing a
solvent and microcapsules filled with liquid-state substances, the

microcapsules being dispersed in the solvent, comprising the steps
of:

- forming a mixture of the working fluid and abrasive particles;
- supplying the mixture of the working fluid and the abrasive
- 5 particles to a working point of the workpiece; and
- performing a polishing process of the workpiece at the
- working point while supplying the mixture to the working point.

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- 6. A working process which performs a working of a
- workpiece with a working fluid, the working fluid containing a
- solvent and microcapsules filled with liquid-state substances, the
- 15 microcapsules being dispersed in the solvent, comprising the steps
- of:

- supplying the working fluid to a working point of the
- workpiece; and
- performing a plastic deformation process of the workpiece at
- 20 the working point while supplying the working fluid to the working
- point.

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7. A method of production of a working fluid which is supplied to a working point where a working of a workpiece is performed with the working fluid, comprising the steps of:

5 producing microcapsules that are filled with liquid-state substances; and

mixing the microcapsules and a solvent so that the microcapsules are dispersed in the solvent to form the working fluid,

10 wherein, in said producing step, a process, which is selected from the group including at least a surface polymerization process, an "in situ" polymerization process, a coacervation process, an immersion hardening/coating process and an immersion drying process, is performed to produce the microcapsules filled with the liquid-state substances.

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